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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/712,630 | 11/12/2003 | Qiang Wu | 010116C1 | 2190 |

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QUALCOMM INCORPORATED
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| EXAMINER |
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WONG, BLANCHE

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| ART UNIT | PAPER NUMBER |
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2419

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| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

07/13/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com
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|------------------------------|--------------------------------------|----------------------------------|--|
| Office Action Summary | Application No. 10/712,630 | Applicant(s) WU ET AL. | |
| | Examiner Blanche Wong | Art Unit 2419 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 12-20 is/are allowed.
- 6) ☒ Claim(s) 5-8 is/are rejected.
- 7) ☒ Claim(s) 9-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>Apr22'09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
2. The allowability of claim 5 has been withdrawn.

Response to Arguments

3. Applicant's arguments filed February 26, 2008 have been fully considered but they are not persuasive.
4. Applicant states that "[m]easuring and reporting do not necessarily include comparing". Remark, p.10, para. 3. However, Examiner respectfully disagrees. In order to determine handoff, the measurement has to be compared against some threshold. Applicant further states that "the received signal measurements from other sectors are not specifically disclosed as being compared to a signal level of a current serving sector". Remark, p.10, para. 3. However, Examiner respectfully disagrees. If a handoff is not comparing the signal level of the current sector with that of another sector, to check if the mobile is better served by another sector and thus, to initiate a handoff, then Examiner is unclear what other signal level should the signal level of the current sector be compare to. Examiner has included extra prior art.
5. Applicant states that "the signal strengths are simply measured by the mobile and are not delta credits". Remark, p.11, para. 2. However, Examiner respectfully

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disagrees. Delta credits are not defined in the Specification. Therefore, for the purpose of examination, delta credits can be interpreted as differences.

6. Applicant states that "collecting is not equivalent to accumulating". Remark, p.11, para. 3. However, Examiner respectfully disagrees. If Applicant is saying that to accumulate is to add, such a limitation is not found in the claims.

7. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 5-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganesh et al. (U.S. Pat No. 6,360,098) in view of Ritz et al. (WO 96/13914).

With regard to claim 5, Ganesh discloses

a comparator (**mobile station 32, col. 5, line 44**) comparing each of a plurality of signal levels (**signal strengths**) received from a plurality of active sectors with a signal level of a current serving sector to produce a difference (**"the mobile station measures**

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and reports to a sector server the [signal] strengths ...", col. 6, lines 43-44) (See Also signal strength comparisons between base stations for determining when to hand off, col. 5, lines 49-50) (the base station can be in different sector)(the current serving sector is the sector that the mobile station is currently in; all the other sectors are active sectors where the mobile station can hand off to);

delta generator (**sector servers 28, col. 6, line 37**), coupled to the comparator, for generating a delta credit for each of said plurality of active sectors (**optimum list**) (**a neighbor list representing an "optimum" list for each sector, col. 6, line 54**) based on said difference;

an accumulator (**mobile station 32, col. 5, line 44**), coupled to the delta generator, for accumulating a plurality of delta credits to produce an accumulated total credit (**signal strengths are collected/accumulated before comparisons are made**) (**signal strength comparisons between base stations for determining when to hand off, col. 5, lines 49-50**); and

a best sector identifier (**sector servers 28, col. 6, line 37**), coupled to the accumulator, for identifying a best serving sector (**optimum list**) (**a neighbor list representing an "optimum" list for each sector, col. 6, line 54**) from said accumulated total credit (**comparison**).

However, Ganesh is unclear about comparing received signal among sectors to provide for hand-off.

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In an analogous art of hand-off in a frequency hopping multiple access communication system, Ritz discloses a sectorized communication system **(Title)** and hand-off **(Abstract)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Ritz, with Ganesh, in order to provide for handoff between sectors.

With regard to claim 6, Ganesh further discloses said plurality of signal levels received from said plurality of active sectors comprises a fixed rate signal level **(a phase reference, col. 5, line 48)** and a variable rate signal level **(variable rate, col. 1, line 33)**.

With regard to claim 7, Ganesh further discloses an adjustment module **(mobile station 32, col. 5, line 44)** for adjusting said fixed rate signal level to produce an adjusted fixed rate signal level **(signal strength is adjusted at hand off) (signal strength comparisons between base stations for determining when to hand off, col. 5, lines 49-50)**.

With regard to claim 8, Ganesh further discloses an authorization module **(mobile station 32, col. 5, line 44)** for authorizing said plurality of delta credits **(signal strengths) ("the mobile station measures and reports to a sector server the [signal] strengths ...", col. 6, lines 43-44)**.

Allowable Subject Matter

10. Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

With regard to claim 1, the prior art of record fails to anticipate or make obvious an access terminal comprising: “a signal level estimator to deduct an offset value from a fixed rate signal level of the current serving sector and a fixed rate signal level of each of a plurality of active sectors in an active set to generate *an adjusted fixed rate signal level for each of the current serving sector and sectors in the active set*; a comparator, to determine differences between a plurality of signal levels received from each of the plurality of active sectors and at least the adjusted fixed rate signal level of the current serving sector; an accumulator for accumulating total credits ... based on the comparison; and a new sector identification module to receive the accumulated total credit and to select the best serving sector ... based on the total credits” (with emphasis).

With regard to claim 9, the prior art of record fails to anticipate or make obvious DRC lock bits. DRC lock bits is proprietary to Qualcomm.

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Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Blanche Wong/

Examiner, Art Unit 2419

June 2, 2009

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2419